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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/663,925

09/16/2003

Michael E. Benz

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EXAMINER

PENG, KUO LIANG

ART UNIT

PAPER NUMBER

1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

HL

<b>Office Action Summary</b>	<b>Application No.</b> 10/663,925	<b>Applicant(s)</b> BENZ ET AL.	
	<b>Examiner</b> Kuo-Liang Peng	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/22/06 Response.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-28, 30-34, 39 and 40 is/are pending in the application.
- 4a) Of the above claim(s) 18-28, 30-34, 39 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/22/06</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Applicants' response filed December 22, 2006 is acknowledged.  
Claims 12, 29 and 35-38 are deleted. Claims 18-28, 30-34 and 39-40 are withdrawn. Now, Claims 1-11 and 13-17 are pending for consideration.
2. The text of those sections of Title 35, U.S. code not included in this action can be found in prior Office Action(s).

#### ***Claim Rejections - 35 USC § 102 and 103***

3. Rejection of Claims 1-11 and 13-17 under 35 USC 102(b) as being anticipated by Gunatillake327 (WO 99/50327, US 6 437 073) and Rejection of Claims 1-11 and 13-17 under 35 USC 102(b) as being anticipated by Gunatillake863 (WO 99/03863, US 6 420 452) are maintained because the rejection is adequately set forth in paragraph 5 of Paper No. 052706. Applicant's arguments have been fully considered but they are not persuasive. The focus argument related to the core patentability is discussed below.

For Applicants' argument (Remarks, page 2, 5<sup>th</sup> paragraph to page 3, 2<sup>nd</sup> paragraph and page 3, 4<sup>th</sup> paragraph), as mentioned in the previous Office action,

since Gunatillake327 and Gunatillake863's compounds read on the claimed compound, the segments derived from them should both inherently possess the same "soft" property.

For Applicants' argument (Remarks, page 3, 3<sup>rd</sup> paragraph), it appears that not all chain extenders form hard segments. Rather, depending on the characteristics of the chain extenders, soft segments can be produced.

4. Rejection of Claims 1-11, 14-15 and 17 under 35 USC 103(a) as being as being unpatentable over Zdrahala (US 4 647 643) is maintained because the rejection is adequately set forth in paragraph 5 of Paper No. 081906a. Applicant's arguments have been fully considered but they are not persuasive. The focus argument related to the core patentability is discussed below.

For Applicants' argument (Remarks, page 3, last paragraph to page 4, 1<sup>st</sup> paragraph and page 4, 5<sup>th</sup> to page 5, 1<sup>st</sup> paragraph), Examiner disagrees because Zdrahala's siloxane compound is merely a preferred embodiment. Zdrahala does teach the polycarbosilane compounds. Furthermore, Hardman and Torkelson document and Ward document, no segments derived from polycarbosilane diols are taught. Therefore, Applicant's argument appears to be lack of merit with respect to the polycarbosilane diols.

For Applicants' argument (Remarks, page 4, 2<sup>nd</sup> paragraph), as mentioned in the previous Office action, Zdrahala teaches the use of a silicone diol of formula (III) where W can be a C1-C4 alkylene. Since this silicone diol is a homolog of Applicants' claimed compound, a *prima facie* case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) See MPEP 2144.09.

For Applicants' argument (Remarks, page 4, 3<sup>rd</sup> paragraph), Applicants appears to argue that the polyurethanes containing polyethylene or polypropylene segments undergo strain/stress-induced crystallization. Furthermore, polyether (tetramethyl ether, C4) and polyester (tetramethyl adipate, C4) have stress crystallization characteristics too. However, since there is no data regarding the polymers having segments derived from diols more than four carbon atoms, the argument appears to be irrelevant. In addition, Wilkes does not teach segments derived from polycarbosilane diols. As such, the Wilkes' stress/strain-induced crystallization phenomena cannot be correlated to that of Zdrahala's.

For Applicants' argument (Remarks, page 4, 4<sup>th</sup> paragraph), since for comparison, there is no data regarding the polymers having segments derived from diols more than four carbon atoms, the argument appears to be irrelevant. In addition, Bonart does not teach segments derived from polycarbosilane diols. As such, the Bonart' stress/strain-induced crystallization phenomena cannot be correlated to that of Zdrahala's.

For Applicants' argument (Remarks, page 5, 2<sup>nd</sup> paragraph), it is not clear as to what DiDomenico document refers to. Furthermore, Examiner assumes that Tapsak patents refer to US 6 080 829 and US 6 534 587 cited in the information disclosure statement of December 22, 2006. However, the stain induced crystallization behavior of Tapsak's patents appears to be irrelevant because they teach poly(silalkylene-siloxane) diols, rather than the claimed polycarbosilane diols. Also, Tapsak's patents do not teach polyurethanes.

For Applicants' argument (Remarks, page 5, 3<sup>rd</sup> paragraph), Dorset teaches polyolefins, but not polymer derived from the polycarbosilane diols. Also, Dorset do not teach polyurethanes. As such, the Dorset's stress/strain-induced crystallization phenomena cannot be correlated to that of Zdrahala's.

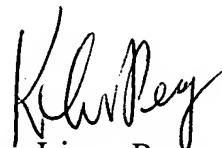
For Applicants' argument (Remarks, page 5, 4<sup>th</sup> paragraph), in view of Examiner's positions regarding Zdrahala's disclosure, supra, it appears that Applicants have not yet demonstrated the criticality of the claimed carbon number.

5. The reference U.S. Application Number 11/484,219 is lined through because it is improperly listed in the information disclosure statement filed December 22, 2006. However, it has been fully considered.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp  
March 14, 2007

  
Kuo-Liang Peng  
Primary Examiner  
Art Unit 1712